

Remarks

A Request For Continued Examination ("RCE") is being filed in the above matter to remove the finality of the Office Action dated November 21, 2005. The applicants responded to a Final Office Action in a response dated March 21, 2006. In an Advisory Action dated April 4, 2006, the Examiner stated that the March 21, 2006 response was considered. However, the record indicates that there was no substantive consideration of the March 21, 2006 response. Accordingly, applicants' respectfully request substantive consideration of the response dated March 21, 2006. While not subject to amendment herein, the claims are re-presented for the convenience of the Examiner.

In the Advisory Action dated April 4, 2006, the Examiner's complete rejection of the claims is as follows:

...all the limitations have been previously addressed and therefore applicant's arguments are deemed not to be persuasive. Further applicant's arguments pertaining to the 35 USC § 112 paragraph rejection on claims 34, 35, 38-42 are not persuasive.
April 4, 2006 Advisory Action, page 2.

The Examiner's Advisory Action of April 4, 2006 was not substantive at least in view of the requirements of *MPEP* § 707(f). *MPEP* § 707(f) states as follows: "Where the requirements are traversed, or suspension thereof requested, the Examiner should, if he or she repeats the rejection, take note of the applicant's argument and answer the substance of it." The Examiner in the Advisory Action of April 4, 2006 failed to answer the substance of any applicant argument presented in the Office Action response of March 21, 2006. *MPEP* § 707.07(f) also states that: "If it is the examiner's considered opinion that the asserted advantages are not sufficient to overcome the rejection(s) of record, he or she should state the reasons for his or her position in the record, preferably in the action following the assertion or argument relative to such advantages. By so doing the applicant will know that the asserted advantages have actually been considered by the Examiner..." Applicants in the response dated March 21, 2006 recited various advantages of the invention. For example, at page 7 of the March 21, 2006 response, applicants asserted that "it becomes unnecessary to again generate control information from the base band signal and it becomes possible to provide contributions to reduction in a circuit scale and enhancement of the processing speed." While

the Examiner has baldly asserted that the applicants' response of March 21, 2006 is not persuasive, the Examiner has not stated a reason for his position with respect to the above and other advantages called out by the applicants as called for by *MPEP* §707(f). Further regarding *MPEP* §707(f), ¶7.37 states: "1. The Examiner must address all arguments which have not already been responded to in the statement of the rejection" and "2...provide explanation as to nonpersuasiveness." As to applicants' response of March 21, 2006 to the standing prior art based rejection and the rejections under 35 U.S.C. §112, the Examiner has not addressed any argument presented by the applicants and has not provided any argument as to non-persuasiveness. In addition to the above, *MPEP* §707.07(f) also states "an examiner must provide clear explanations of all actions taken by an Examiner during prosecution of an application." For the above reasons, applicants respectfully assert that the response of March 17, 2006 has not been substantively considered and respectfully request consideration of the March 21, 2006 response.

In addition, applicants herein present new arguments for consideration by the Examiner. The remarks contained herein incorporate arguments presented in the response of March 21, 2006 and additional arguments.

Claims 34-36 and 38-42 are rejected under 35 U.S.C. §112 for lack of support in the specification and lack of antecedent basis. The claims have been amended to overcome these rejections. Further, in claim 42 "ration" has been changed to "ratio" as requested by the Examiner.

The Examiner states that the specification does not provide support for the feature of "an encoder to time-divisionally multiplex the picture signals in a video period and the control signal in a retrace period, thereby to encode the picture signals and the control signal into transmission path signals suited to the transmission path" recited in claims 34 and 35, respectively.

It is submitted that support for the above limitations is described in the specification, *e.g.*, in paragraph [0109] as "Numeral 1602 denotes a transmission path encoding circuit, which encodes RGB signals outputted from the MPEG decoder 1601 into signals in the forms suited to the transmission path, and outputs the encoded signals during a scanning period,

while superposes the top/bottom information and the field repeat information according to the form of the above-described control data during a retrace period.” See also Figure 16.

It is therefore submitted that the specification provides adequate support for the features as recited in claims 34 and 35.

Further, the Examiner states that the specification does not provide support for the feature of “the control signal is time-division-multiplexed in a retrace period” as claimed in claims 38-40, respectively.

It is submitted that the above elements are described in the specification *e.g.*, in paragraph [0097] which states “Therefore the output signal is the R signal during the video signal period while it is the CTL0 signal during the retrace period, which means control data can be transmitted.” The above elements are also discussed, *e.g.*, in Fig. 10 and in the accompanying description.

It is therefore submitted that the specification provides support for the features as claimed in claims 38-40.

According to the *MPEP* §2143, three basic criteria must be met to establish a *prima facie* case of obviousness. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant’s disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

In order to sustain a rejection based on obviousness the Examiner must establish that the prior art teaches or suggests each and every element of a claim.

Regarding claims 34, 35, 38, 39, and 40, each of claims 34, 35, 38, 39, and 40, recites elements relating to transmitting a control signal in a transmission path after a control signal is decoded. For example, claim 34 recites the combination of “a decoder to decode...a control signal” and “an encoder to time divisionally multiplex the picture signals in a video period and the control signal in a retrace period.” Claim 35 recites the combination of “a decoder to decode...a control signal” and “an encoder to time divisionally multiplex the picture signals in a retrace period”. Claim 38 recites “a decoder to decode...a control signal” and further states that “the control signal is time-division-multiplexed in a retrace period.” Claim 39 recites “a decoder to decode...a control signal” and further states that “the control signal is time-divisionally multiplexed in a retrace period.” Claim 40 recites a “decoder to decode...a control signal” and further recites that “the control signal is time division-multiplexed in a retrace period.”

Regarding claim 34, applicants have analyzed the final office action, and note that the Examiner has not established and has not even alleged that the prior art teaches or suggests in the context of the remaining claim elements the combination of “a decoder to decode...a control signal” and “an encoder to time divisionally multiplex the picture signals in a video period and the control signal in a retrace period.” While it is believed that the Examiner may have made reference to paragraph [0100] of Kato because of a reference to decoding in that section, the Examiner has not established and has not even alleged that there is a teaching or suggestion in Kato or another reference of a later transmission of decoded control signals in a transmission path after the decoding referred to in paragraph [0100] is completed. Accordingly, the Examiner has not alleged that specific combination of elements recited in claim 34 are taught or suggested in the prior art.

Regarding claim 35, applicants have analyzed the final office action and note that the Examiner has not established and has not even alleged that the prior art teaches or suggests in the context of the remaining claim elements the combination of “a decoder to decode...a control signal” and “an encoder to time divisionally multiplex the picture signals in a retrace period.” While it is believed that the Examiner may have made reference to paragraph [0100] of Kato because of a reference to decoding in that section, the Examiner has not established and has not even alleged that there is a teaching or suggestion in Kato or another reference of a later transmission of decoded control signals in a transmission path after the decoding

referred to in paragraph [0100] is completed. Accordingly, the Examiner has not alleged that specific combination of elements recited in claim 35 are taught or suggested in the prior art.

Regarding claim 38, applicants have analyzed the final office action and note that the Examiner has not established and has not even alleged that the prior art teaches or suggests in the context of the remaining claim elements “a decoder to decode...a control signal” wherein further “the control signal is time-division-multiplexed in a retrace period.” While it is believed that the Examiner may have made reference to paragraph [0100] of Kato because of a reference to decoding in that section, the Examiner has not established and has not even alleged that there is a teaching or suggestion in Kato or another reference of a later transmission of decoded control signals in a transmission path after the decoding referred to in paragraph [0100] is completed. Accordingly, the Examiner has not alleged that specific combination of elements recited in claim 38 are taught or suggested in the prior art.

Regarding claim 39, applicants have analyzed the final office action and note that the Examiner has not established and has not even alleged that the prior art teaches or suggests in the context of the remaining claim elements “a decoder to decode...a control signal” wherein further “the control signal is time-divisionally multiplexed in a retrace period.” While it is believed that the Examiner may have made reference to paragraph [0100] of Kato because of a reference to decoding in that section, the Examiner has not established and has not even alleged that there is a teaching or suggestion in Kato or another reference of a later transmission of decoded control signals in a transmission path after the decoding referred to in paragraph [0100] is completed. Accordingly, the Examiner has not alleged that specific combination of elements recited in claim 39 are taught or suggested in the prior art.

Regarding claim 40, applicants have analyzed the Final Office Action and note that the Examiner has not established and has not even alleged that the prior art teaches or suggests in the context of the remaining claim elements a “decoder to decode...a control signal” and wherein further “the control signal is time division-multiplexed in a retrace period.” While it is believed that the Examiner may have made reference to paragraph [0100] of Kato because of a reference to decoding in that section, the Examiner has not established and has not even alleged that there is a teaching or suggestion in Kato or another reference of a later transmission of decoded control signals in a transmission path after the decoding

referred to in paragraph [0100] is completed. Accordingly, the Examiner has not alleged that specific combination of elements recited in claim 40 are taught or suggested in the prior art.

Further regarding claims 34, 35, 38, 39, and 40, it appears that the Examiner has made a reference to paragraph [0058] of Kato in support of the conclusion by the Examiner that the above claims are obvious. However, the reference to paragraph [0058] is not understood. Whereas each of claims 34, 35, 38, 39, and 40 specifically require “a control signal which is generated based on a compressively coded signal,” paragraph [0058] describes an external control information input section. If the Examiner will maintain the claim rejections over Kato, the Examiner is respectfully requested to explain the Examiner’s reliance on paragraph [0058] of Kato. The reference to Maruoka by the Examiner is also not understood. If the Examiner will maintain the claim rejections over Maruoka, the Examiner is respectfully requested to explain why the Examiner believes Maruoka’s reference to “independent data” constitutes a teaching or suggestion of “a control signal which is generated based on the compressively coded signal” as recited in the claims.

Regarding claim 33, claim 33 recites in combination with numerous additional elements “a control signal which is generated based on the compressively coded signal.” Whereas it appears that the Examiner may have made a general reference to paragraphs [0058] and [0100] of Kato in reference to the element of “a control signal which is generated based on the compressively coded signal” the Code of Federal Regulations states that:

When a rejection is made based on obviousness and a reference is complex and shows or describes inventions other than that claimed by the applicant, *the particular part of the reference relied upon must be designated as nearly as practicable.* (emphasis added) 37 CFR §1.104(c)(2).

If the Examiner wishes to maintain the rejection of claim 33, the Examiner is respectfully requested to point out the specific sections of the prior art references relied upon in rejecting claim 33.

Under MPEP §2144, the strongest rationale for combining references is a recognition, expressly or impliedly in the prior art or drawn from a convincing line of reasoning based on established scientific principles or legal precedent, that some advantage or expected beneficial result would have been produced by their combination. *In re Sernaker*, 702 F.2d

989 (Fed. Cir. 1983). The Examiner must present a convincing line of reasoning supporting the rejections. *Ex parte Clapp*, 227 USPQ 972 (Bd. Pat. App. & Inter. 1985) also cited in *MPEP* §2144.

The claims rejections under 35 U. S. C. §103 are further traversed for the reason that the Examiner has not provided “a convincing line of reasoning” in support of the proposed combinations of references. For example, herein below is presented the Examiner’s proposed rationale for combining Kato, Liu and Maruoka:

The combination of Kato, et al. and Liu, et al. discloses substantially the same transmission apparatus as above, but does not particularly disclose an encoder to time-divisionally multiplex the picture signals in a video period and the control signal in a retrace period, thereby to encode the picture signals and the control signal into transmission path signals suited to the transmission path as claimed in claims 34 and 35. However, Maruoka discloses a television signal receiver system as shown in Figure 1B, and teaches the conventional use of an encoder for time division multiplexing of audio signal and independent data (*i.e.*, control data) during the retrace interval of the video signal, and the encoding of the picture signals and control signal into transmission path signals suited to the transmission path (*i.e.*, the transmission of the multiplexed digital signal as a packet, see column 1, line 59 to column 2, line 13). Therefore, it would have been obvious to one of ordinary skill in the art, having he Kato, et al., Liu, et al, and Maruoka references in front of him/her and the general knowledge of time division multiplexing systems, would have had no difficulty in providing an encoder for time division multiplexing of control data during the retrace interval of the video signal, and the encoding of the picture signals and control signal into transmission path signals suited to the transmission path as taught by Maruoka for the transmission system of Kato, et al., and Liu, et al. for the same well known time division multiplexing of video and associated data during the retrace period for transmission to a receiver purposes as claimed. *November 21, 2005 Office Action, pages 6 and 7.*

Far from being able to identify “a convincing line of reasoning” in support of a combination, applicants cannot find presented in the above passage any discernable reason whatsoever in support of the position that Maruoka is combinable with Kato and Liu. Applicants respectfully assert that with the above passage, the Examiner has merely offered a conclusion without providing any reasoning supporting the conclusion that the referred to references are combinable. The Examiner does offer the unsupported opinion that a skilled artisan “would have had no difficulty in providing an encoder for time division multiplexing of control data during a retrace period.” Without conceding that the Examiner’s opinion is correct, applicants respectfully point out that whether or not Maruoka is *capable* of being combined with Kato and Liu has no relevance whatsoever to the inquiry of whether there is motivation to combine Maruoka with Kato and Liu. Although a prior art device “may be capable of being claimed, there must be a suggestion or motivation in the references to do so. *In re Mills*, 916 F.2d 680, 682, cited in *MPEP* §2193.01. If the Examiner will maintain the position that Maruoka is combinable with Kato and Liu, the Examiner is respectfully

requested to explain the significance, if it were assumed correct (which it is not) that a skilled artisan would have no difficulty in providing an encoder for time division multiplexing of control data during a retrace period. The Examiner is also requested to explain why the Examiner regards the reference to "independent data" in Maruoka to be a teaching or suggestion of "a control signal generated based on the compressively coded signal" as recited in the claims.

Also, in the Final Office Action the Examiner makes certain references to technologies alleged to be "well known." It is believed that such rejections are based on Official Notice. If the Examiner wishes to maintain the rejections of claims rejected based on Official Notice, the Examiner is respectfully requested to provide documentary evidence in support of the various assertions of common knowledge. *MPEP §2144.03(A)*. In providing such evidence, the Examiner is respectfully requested to make reference to the specific combinations of elements of applicants' claims (and not merely the elements of the dependent claims without reference to the elements of the base claim). The Examiner is also respectfully requested to set forth explicitly the reasons for the various rejections based on Office Notice. *See MPEP §2144.03(B)*. The Examiner must provide specific factual findings predicated on sound technical and scientific reasoning to support his or her conclusion of common knowledge. *MPEP §2144.03(B)*. It would not be appropriate for the Examiner to take Official Notice of facts without citing a prior art reference where the facts asserted to be well known are not capable of instant and unquestionable demonstration as being well known. *MPEP §2144.03(A)*.

Claims 34, 35, 38, 39, and 40 relate to time-division-multiplexing of control signal (e.g., MPEG stream information, etc.) into a base-band signal when outputting and transmitting the base-band signal.

Usually, after the base-band signal is obtained by decompressing and decoding the compressed and coded signal, a control signal such as MPEG compression rate is not required. However, for example, in the digital interface between STV (transmission apparatus) and TV (receiving apparatus), a control signal is required in the original control such as picture quality control including noise reduction or enhancing, or display method control on the TV side.

According to the present invention as recited in claims 34, 35, 38, 39, and 40, by time-division-multiplexing the control signal (MPEG stream information, etc.) into the base-band signal when outputting and transmitting the base-band signal, it becomes unnecessary to again generate a control information from the base-band signal, and it becomes possible to provide contributions to reduction in a circuit scale and enhancement of the processing speed.

Moreover, initially, if a control signal is superimposed on a base-band signal having a large amount of information to be transmitted, signal lines or a transmission rate would unfavorably increase further. The present invention is intended to suppress the increases in the signal lines and the transmission rate to the minimum extent, which is provided by a construction in which "a picture signal is outputted after the permissible signal is checked on the basis of the I2C signal at the TV end." Therefore, it becomes possible for the picture signal to be transmitted in a form which can be displayed at the receiving apparatus end. The prior art does not teach this concept. As a result of the present invention increases in circuit scales and in transmission rate can be reduced.

Claims 33-42 are rejected over Kato, et al. in view of Liu, et al. and further with any one of Maruoka, Ryoo and/or Ishikawa, et al under 35 U.S.C. §103.

The primary reference to Kato, et al. (US2002/0001346) discloses a coding apparatus which divides a picture signal of N pixels x M lines to be coded into a first picture signal portion and a second signal portion other than the first signal portion, and adds particular discrimination codes to the header of the second picture portion. Further, Kato discloses a decoding apparatus which decodes the signal which is coded by the above-coding apparatus by decoding only the first picture signal portion when the decoding apparatus has only the ability of decoding only the first picture signal portion, with skipping the second picture signal portion by discriminating the same from the discrimination codes attached thereto.

In paragraph [0058] of Kato, it is disclosed that control signals, such as picture frame size, output bit rate, and picture structure signal, are outputted as compression coding control signals from an external input section. Further, in paragraph [0100] of Kato; it is disclosed that header information is decoded by an inverse VLC element, the obtained control information for the decoding picture signals are stored in a memory, and the decoding

apparatus for decoding picture signals are controlled by those control information. However, Kato at best teaches only that control of the decoding apparatus is based on the control signal obtained in this inverse VLC element. There is no description or suggestion in Kato that when the base-band signal is outputted after the decoding is performed, the control signal (MPEG stream information, etc.) is multiplexed with the base-band signal to be transmitted together as set forth in claims 34, 35, 38, 39, and 40. This is clear also from the facts that only the video signals are indicated to be outputted in Figures 5, 6, and 8 of Kato.

Any attempt to modify Kato with Liu, et al. would be a reconstruction of the Kato system which would not be suggested or be obvious to one of ordinary skill in the art. Similarly the combination of Kato with any of Maruska, Ryoo and/or Ishikawa would also fail for reasons set forth above.

Regarding the claims discussed herein, the applicants' selective treatment and emphasis of independent claims of the application should not be taken an indication that the applicants believe that the Examiner's dependent claim rejections are otherwise sufficient. In fact, it is noted in the office action that the dependent claims are rejected without substantial, and in certain instances, without any reference to the limitations of the dependent claims in combination with the base claim elements. In rejecting claims for want of novelty or for obviousness, the Examiner must cite the best references at his/her command. When a reference is complex or shows or describes inventions other than that claimed by the applicant, the particular part relied on must be designated as nearly as practicable. The pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified. *37 C.F.R. 1.104(c)(2)*. If the Examiner will maintain the rejections of the claims including the dependent claims, the Examiner is respectfully requested to specify which claims are being rejected when references are discussed. The Examiner is further respectfully requested to specify each claim, including each dependent claim in making the rejections in accordance with the requirements of *37 C.F.R. §1.104*.

Also, while the applicants herein may have highlighted in certain instances herein specific elements of a claim for purposes of demonstrating an insufficiency of a claim rejection, the applicants emphasis on a specific claim element for such limited purposes

should not be taken as an indication that the applicants have asserted that a claim is allowable for its recital of a specific element out of the context of the combination of elements recited.

Accordingly, in view of the above amendments and remarks, applicants believe all of the claims of the present application to be in condition for allowance and respectfully request reconsideration and passage to allowance of the application.

If the Examiner believes that contact with applicants' attorney would be advantageous toward the disposition of this case, the Examiner is herein requested to call applicants' representative at the phone number listed below.

The Commissioner is hereby authorized to charge any additional fees associated with this communication or credit any overpayment to deposit Account No. 50-0289.

Respectfully submitted,

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Date: May 22, 2006



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